

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TENNESSEE  
WESTERN DIVISION

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ASENTINEL LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	
	)	No. 2:10-cv-02706-JPM-tmp
CASS INFORMATION SYSTEMS,	)	
INC.,	)	
	)	
Defendant.	)	

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**ORDER ADOPTING REPORT AND RECOMMENDATION AND GRANTING DEFENDANT'S  
MOTION FOR PARTIAL SUMMARY JUDGMENT**

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Pending before the Court is the Report and Recommendation of Magistrate Judge Tu M. Pham ("Rep. and Rec."), submitted February 17, 2012 (Docket Entry ("D.E.") 163), on Defendant's Motion for Partial Summary Judgment that Certain Claims of the Asserted Patents are Invalid as Indefinite (D.E. 102), recommending that the Motion be granted. Plaintiff filed its Objection to the Magistrate's Report and Recommendation of February 17, 2012, ("Pl.'s Objection") on March 2, 2012. (D.E. 168.) Defendant filed its Response to Plaintiff's Objection on March 16, 2012. (D.E. 173.)

In determining that the Motion should be granted, the Magistrate Judge reasoned that the specifications of the patents-at-issue do not sufficiently disclose the algorithms associated with the "means for importing" and "means for organizing elements into common categories" claims at issue.

(Rep. and Rec. 28.) Specifically, the Magistrate Judge found that (1) there was no algorithm disclosed regarding how the user application 5 receives invoice data or how the hard-coded algorithms work, nor was there any disclosure regarding the algorithmic steps performed by the Invoice Management module 23 (id. at 32); and (2) there was no algorithm for how the software performs the function of arranging several elements into common categories (id. at 34). Consequently, the Magistrate Judge recommended that, because at least one of these two means-plus-function limitations is found in each of the four independent claims-at-issue (and by incorporation all of the dependent claims), the Court find all of the claims-at-issue in the patents-in-suit invalid for indefiniteness.

Plaintiff objects and asserts that the claims-at-issue are not invalid as indefinite on four principal grounds: (1) the patents' specifications detail the requisite structure of the "means for importing" because hardware structures such as a data communications pathway, keyboard, mouse, and monitor are specialized components that are adequate defining structures to render the bounds of the claims understandable to an ordinary artisan; (2) the patent specification is not merely "purely functional in nature" but discloses an algorithmic structure acceptable under Typhoon Touch Techs., Inc. v. Dell, Inc., 659 F.3d 1376 (Fed. Cir. 2011); (3) the patent specifications

describe both hardware and software structures for performing the recited function of the claim "means for organizing"; and (4) the Magistrate Judge failed to hold Defendant to its burden of showing invalidity by clean and convincing evidence. (Pl.'s Objection 6-8.) Plaintiff submitted a Rebuttal Declaration of Leonard J. Forys, Ph.D in Support of Plaintiff Asentinel LLC's Objection to the Magistrate's Report and Recommendation of February 17, 2012 ("Forys Rebuttal Decl."). (D.E. 168-1.) Defendant also submitted a Rebuttal Declaration of its expert, Charles H. Sauer, Ph.D ("Sauer Rebuttal Decl."). (D.E. 173-1.) The Magistrate Judge previously found Dr. Forys and Dr. Sauer to be persons of ordinary skill in the art. (Rep. and Rec. 16.) Therefore, the rebuttal declarations are accepted.

## **I. Background**

The Magistrate Judge proposed the following findings of fact:

Asentinel is a Memphis-based corporation that develops telecommunication expense management ("TEM") technology. Large national and multinational corporations purchase voice and data telecommunications services on a large scale and at significant expense, and TEM technology allows those corporations to detect billing errors and more effectively manage their telecommunications services. Asentinel was co-founded by Jason Fisher, who is listed as the inventor of two patents that involve the use of TEM technology. Asentinel is the owner of these two patents. Specifically, Asentinel was granted United States Patent No. 7,340,422 on March 4, 2008, titled "Systems and Methods for Processing and Managing Telecommunications Invoices" ("`422 patent"),

and was granted United States Patent No. 7,805,342 on September 28, 2010, titled "Systems and Methods for Identifying and Processing Telecommunications Billing Exceptions" ("342 patent")(collectively referred to as the "patents-in-suit"). In general terms, the technology in the patents-in-suit involves automated auditing of telecommunications invoices by receiving the invoices, extracting data from the invoices, performing an automatic audit on the extracted data to check for billing errors, and generating reports for customers identifying these billing errors.

Asentinel brings this patent infringement action against Cass, alleging that Cass infringed one or more of the claims of the patents-in-suit, in violation of 35 U.S.C. § 271(a), (b), and (c). In the instant motion, Cass moves for partial summary judgment on the grounds that certain claims are invalid for indefiniteness pursuant to 35 U.S.C. § 112. These challenged claims include (1) from the '422 patent, Claim 38, Claims 39-45, 48, 50-52, and 54-55 (which depend from Claim 38), and Claim 56; and (2) from the '342 patent, Claim 10, Claims 11-13, 15, and 17-20 (which depend from Claim 10), Claim 21, and Claims 22 and 24-26 (which depend from Claim 21) (collectively referred to as the "claims-at-issue").

. . .

Cass contends (and Asentinel does not dispute) that all of the claims-at-issue include "means-plus-function" limitations pursuant to 35 U.S.C. § 112 ¶ 6. The parties further agree that, for purposes of this summary judgment motion, the '422 and '342 patents are substantially identical, as both contain similar asserted claims and supporting specification language. (Forys Aff. ¶ 20.)

. . .

Cass argues that in order for a means-plus-function limitation to be valid, the patent specification must disclose a "structure" that constitutes the means by which each particular function is performed. In this case, Cass contends that the specifications for the claims-at-issue fail to disclose structure corresponding to the recited

function in the form of a computer algorithm. Therefore, according to Cass, the court should find that the claims-at-issue are invalid for indefiniteness. Alternatively, Cass alleges that the court should grant summary judgment on these claims because there is no clear link between the recited functions in these elements and any purported structure in the specifications.

(Rep. and Rec. 2-3, 9, 10-11.) Neither party has objected to these proposed findings of fact. Therefore, the Magistrate Judge's proposed findings of fact are ADOPTED.

## **II. Standard of Review**

A district judge should conduct a de novo review when a magistrate judge has entered a report and recommendation as to a pre-trial motion under 28 U.S.C. § 636(b)(1)(C) and Rule 72(b). The judge may accept, reject, or modify the recommendations of the magistrate judge and may receive additional evidence on the matter. 28 U.S.C. § 636(b)(1)(C); Fed. R. Civ. P. 72(b).

## **III. Analysis**

The parties agree that all of the claims-at-issue include "means-plus-function" limitations pursuant to 35 U.S.C. § 112 ¶ 6. (Rep. and Rec. 9.) The means-plus-functions limitations at issue are "means for causing the computer to import telecommunications invoices" (and variations thereof) and "means for organizing the elements into common categories by the computing device." (Id. at 9-10.) Plaintiff objects to the Magistrate Judge's finding of law that the claims-at-issue fail

to satisfy the definiteness requirement of 35 U.S.C. § 112 ¶ 2.

A patentee may draft a claim limitation in means-plus-function format:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112 ¶ 6. To determine whether a means-plus-function limitation is definite under patent law, a court applies a two-step analysis: first, a court identifies the particular claimed function, and, after identifying the particular claimed function, a court, in the second step of the analysis, looks to the specification and identifies the corresponding structure, material, or act that performs the function. HTC Corp v. IPCom GmbH & Co., KG, 667 F.3d 1270, 1378 (Fed. Cir. 2012). The parties agree that the particular claimed function of "means for importing" is "to receive (as in data)" and the particular claimed function of "means for organizing" is "to arrange several elements into common categories." (Rep. and Rec. 25-26.) The inquiry under the second step of the analysis is, first, "whether structure [is] described in [the] specification, and, if so, whether one skilled in the art would identify the structure from that description." Atmel Corp. v. Info. Storage Devices, Inc., 198 F.3d 1374, 1381 (Fed. Cir. 1999). "[Paragraph

6] represents a quid pro quo by permitting inventors to use a generic means expression for a claim limitation provided that the specification indicates what structure(s) constitute(s) the means." Id. (alterations in original). In order for a claim to meet the particularity requirement of ¶ 2, the corresponding structure of a means-plus-function limitation must be disclosed in a written description in a way that allows one skilled in the art to understand what structure corresponds to the means limitation. Id. at 1382. "Fulfillment of the § 112, ¶ 6 tradeoff cannot be satisfied when there is a total omission of structure." Id.

For the reasons noted below, the Court ADOPTS the Magistrate Judge's finding that the claims-at-issue do not meet the definiteness requirement of § 112.

**A. Plaintiff's Hardware Objections and "Means for Importing"**

Plaintiff objects to the Magistrate Judge's finding that the hardware components disclosed in the patents-in-suit are insufficient structure. (Pl.'s Objection 16.)

Plaintiff first argues that the Magistrate Judge's finding that hardware components such as a keyboard, mouse, monitor, CDROM drive, floppy disk drive, and data communications pathway amount to nothing more than a general-purpose computer and that the specification therefore discloses insufficient structure is

erroneous. (Id.) Plaintiff contends that the Magistrate Judge's reliance on the "general purpose computer" line of cases is incorrect because, while the Federal Circuit has held that a general purpose computer alone is insufficient structure, the same is not true for computer components. (Id. at 16-17.) Rather, Plaintiff argues that computer components are special-purpose devices that do not depend on software programming to control their functions, and that such components provide sufficient structure provided they "render[s] the bounds of the claim understandable to an ordinary artisan." (Id. at 17 (quoting Telcordia Techs, Inc. v. Cisco Sys., Inc., 612 F.3d 1365, 1377 (Fed. Cir. 2010).) Plaintiff submits that a skilled artisan would understand input devices such as a keyboard and a mouse to be necessary for a user to manually input invoices into the computer systems described in the patents-in-suit. (Forys Rebuttal Decl. ¶ 23.) Plaintiff further submits that a skilled artisan would understand that output devices include a monitor to view results. (Id.) Plaintiff contends that these devices are not "the sole component of the structure, but rather form a necessary part of the structure." (Id. ¶ 22.) Defendant argues that these "parts" "cannot perform the function of receiving telecommunications invoice data without a general purpose computer running appropriate software." (Sauer Rebuttal Decl. ¶ 36.)



As the Magistrate Judge noted, "Rather than relying on [computer hardware], [a patentee] ha[s] to identify an algorithm that the computer hardware execute[s]." (Rep. and Rec. 31 (citing HTC Corp., 667 F.3d at 1280).) As discussed infra, the patentee here failed to identify an algorithm performed by the structure of which these components are a "necessary part." See HTC Corp., 667 F.3d at 1278 (discussing appellees' failure to preserve in the district court the argument that the specification failed to disclose an algorithm sufficient to transform component parts into a special purpose computer designed to implement the claimed functions).

Finally, Plaintiff argues that the Magistrate Judge was in error in relying upon the declaration of Dr. Sauer. (Pl.'s Objection 17.) Plaintiff argues that the conclusory testimony of an expert cannot meet the standard of clear and convincing evidence, but offers no argument as to why Dr. Sauer's testimony was conclusory. In his declaration, Dr. Sauer did not simply state that these various components were not capable of performing their claimed functions; he explained that "[a] communications pathway does not receive data, rather it simply transfers data between sender and recipient," and that "[n]either a keyboard nor a mouse receives data, rather such devices are used to transmit keystrokes and cursor positions." (Rebuttal Decl. of Charles H. Sauer, Ph.D (D.E. 114-1) ¶¶ 22(1),

(2).) This testimony is supported by expert opinion and is more than merely conclusory. Plaintiff's objections as to this issue are OVERRULED.

**B. Plaintiff's "Purely Functional" Objections and "Means for Importing"**

Plaintiff objects to the Magistrate Judge's finding that a person of ordinary skill in the art would not recognize the patent specification as disclosing the required algorithm for the "means for importing" claims. (Pl.'s Objection 18.)

Plaintiff argues that all that is required by § 112, ¶ 6 is "sufficient structure for a person of skill in the field to provide an operative software program for the specified function." (Id. (citing Typhoon Touch, 659 F.3d at 1385).) Plaintiff contends that a procedural algorithm may be expressed in any understandable terms, including prose, and cites Typhoon Touch for the proposition that the inclusion of the mathematical algorithm of the programmer in the specification is not necessary to establish structure so long as the specification recites in prose the algorithm to be implemented by the programmer. (Id. at 18, 20.) Plaintiff argues that the Magistrate Judge erroneously cites Blackboard, Inc. v. Desire2Learn, Inc., 574 F.3d 1371 (Fed. Cir. 2009), in concluding that the specification does not disclose a sufficient algorithm for the "means for importing" claims. Plaintiff

argues that in Blackboard, the Federal Circuit held that the cited text failed to provide the requisite structure for the claim limitation at issue because it "describe[d] an outcome, not a means for achieving the outcome," and contends that in the instant case, the disclosure of the patents-in-suit does not describe merely the outcome of importing. (Pl.'s Objection 20-21.) Finally, Plaintiff argues that the Magistrate Judge incorrectly reasoned that the disclosed algorithm was insufficient because the law does not require a patentee to "list[] source code or a highly detailed description of the algorithm to be used to achieve the claims functions in order to satisfy 35 U.S.C. § 112 ¶ 6." (Id. at 21 (citing Aristocrat Techs. Australia Pty Ltd. v. Int'l Game Tech., 521 F.3d 1321, 1338 (Fed. Cir. 2008)).)

To the extent that Plaintiff contends that the Magistrate Judge erroneously required Plaintiff to disclose a mathematical algorithm in the specification, upon review, the Report and Recommendation does not require such a showing. In his review of the applicable law, the Magistrate Judge cited Typhoon Touch for the proposition that "[t]he usage 'algorithm' in computer systems has broad meaning, for it encompasses 'in essence a series of instructions for the computer to follow,' whether in mathematical formula, or a word description of the procedure to be implemented by a suitably programmed computer." (Rep. and

Rec. 23.) It appears to the Court that the Magistrate Judge did not conclude that the algorithm was insufficient simply because it was in prose form.

Plaintiff argues that the algorithm for the "means for importing" limitation is comprised of the following steps:

The second method for receiving invoices is via . . . EDI. These invoices are sent to the user application 5 via email, FTP, HTTP, a VAN or any other transfer protocol. These invoices are collected in one common location that the user application 5 monitors. Typically, this is a local system file folder on the server. The user application 5 will monitor this directory for files in a real-time or batch mode. In the real-time mode, the user application 5 will automatically start the import procedure when a new file is received. In the batch mode, the user application 5 will wait until a specified time to monitor the common location for any new files . . . . For EDI files, the user application 5 looks at the header of the file to determine the vendor. If the vendor is unknown the user application 5 will send a 997 response file as specified in the EDI standard. If the vendor is known the user application 5 will extract the vendor specific mapping rules from the user database 3 and begin the importing process. Once the file is imported the user application 5 verifies the invoice total. If the total does not equal the sum of the charges at the line items, then the invoice is purged from the database and an error message is generated.

(Pl.'s Objection 19; '422 Patent col.7 ll.25-50.) Plaintiff's expert states that this disclosure would be understood by a skilled artisan to include the steps of: (1) monitoring a common location for incoming invoices; (2) user application 5 receiving incoming invoices; (3) either (a) determining the file type and invoking the appropriate module for future processing or (b)

loading the invoice(s) into a system file folder and periodically invoking the appropriate module to process the invoice; and (4) causing the invoice to be entered into the user database. (Pl.'s Objection 19.) The Magistrate Judge found that the the purported software-based algorithms disclosed by the specifications and the "steps" described by Dr. Forsys did not amount to an algorithm and were "purely functional in nature." (Rep. and Rec. 32.)

Plaintiff argues that this conclusion is at odds with Typhoon Touch, in which the Federal Circuit found the following descriptive text sufficient to disclose an algorithmic structure: "Cross-referencing entails the matching of entered responses with a library of possible responses, and, if a match is encountered, displaying the fact of the match, otherwise alerting the user, or displaying information stored in memory fields associated with that library entry." (Pl.'s Objection 20 (citing Typhoon Touch, 659 F.3d at 1385).) Unlike Typhoon Touch, however, the specification in the instant case does not state what the process of importing consists of. The specification states that invoices are automatically imported by user application 5 once they are received. The specification further discloses that, before beginning the importing process, the user application 5 will either send a 997 response file or extract specific vendor mapping rules from the user database 3,

depending on whether the vendor is known or unknown. Then, and only then, does the user application 5 "begin the importing process." The specification then states that "[o]nce the file is imported the user application 5 verifies the invoice total." These steps describe what happens prior to and following the importing process, but, as the Magistrate Judge correctly noted, the steps do not describe how the software performs the function of receiving data. (Rep. and Rec. 32 (citing Blackboard, 574 F.3d at 1383-84).) The portion of the specification to which Plaintiff cites, supra, "simply describes the function to be performed. It says nothing about how the [user application 5] ensures that those functions are performed." Blackboard, 574 F.3d at 1384. As such, "the language describes an outcome, not a means for achieving that outcome." (Id. (citing Aristocrat, 521 F.3d at 1334) (internal quotation marks omitted).)

Finally, Plaintiff argues that the Magistrate Judge's conclusion that the patents' algorithmic structure is insufficient is contradicted by the declaration of Dr. Forys, and submits that there is no clear and convincing evidence in the record that shows that a person of ordinary skill in the field would not understand how to implement this function. (Pl.'s Objection 22.) Expert testimony is not required to construe and determine the invalidity of asserted means-plus-function claims because the determination of claim

indefiniteness is a question of law. See Exxon Research & Eng'g Co. v. United States, 265 F.3d 1371, 1376 (Fed. Cir. 2001).

"[T]he testimony of one of ordinary skill in the art cannot supplant the total absence of structure from the specification." Default Proof Credit Card Sys., Inc. v. Home Depot U.S.A., Inc., 412 F.3d 1291, 1302 (Fed. Cir. 2005). "Although expert testimony and declarations are useful to confirm that the construed meaning is consistent with the denotation ascribed by those in the field of the art, such extrinsic evidence cannot be used to vary the plain language of the patent document." (Id. at 1298 (quoting Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1332 (Fed. Cir. 2003)).) As discussed supra, the Magistrate Judge correctly determined that the plain language of the specification lacked sufficient algorithmic structure; the testimony of Dr. Forys cannot supplant that total absence of structure.

The Court ADOPTS the Magistrate Judge's recommended finding that that a person of ordinary skill in the art would not recognize the patent specification as disclosing the required algorithm for the "means for importing" claims.

### **C. Plaintiff's "Means for Organizing" Objections**

Plaintiff objects to the Magistrate Judge's recommendation that the Court find that the patent specifications do not

disclose sufficient structure for the "means for organizing" claims. (Pl.'s Objection 22.)

Plaintiff argues that the specification discloses both a hardware component and an algorithmic process. (Id. at 23.) Plaintiff contends that the algorithmic process includes the steps of:

(1) each mapping module selecting the appropriate invoice from incoming invoices; (1) (a) if vendor is known importing rules (if any) (e.g., from user database 3) into the mapping module, (b) otherwise applying generic procedures; (3) comparing several elements; and (4) arranging common elements into common categories (common categories can include, but are not limited to, such items as features, taxes and surcharges) in a table for further processing.

(Id. at 23 n.4.) The Magistrate Judge found this algorithm insufficient and purely functional because it does not disclose "how the software performs the function of arranging several elements into common categories." (Rep. and Rec. 34.)

Plaintiff argues that the Magistrate Judge demands more from the patents than the law requires. (Pl.'s Objection 23.)

"While corresponding structure need not include all things necessary to enable the claimed invention to work, it must include all structure that actually performs the recited function." Default Proof, 412 F.3d at 1298 (citing Cardiac Pacemakers, Inc. v. St. Jude Med., Inc., 296 F.3d 1106, 1119 (Fed. Cir. 2002)) (emphasis added). Similar to the purported algorithm for the "means for importing" limitation, the above-



referenced steps culled from the specification do not state what the process of organizing into common categories consists of. This conclusion is further supported by the plain language of the specification. The specification states when invoices are comparable - when the basic elements of the invoice are placed in common categories. ('422 Patent col.4 ll.15-18.) The specification states that vendor specific charges are placed into common categories based on service rendered. (Id. col.4 ll.32-45.) The specification further states that invoice information is organized into comparable categories after it is imported. (Id. col.4 ll.59-62.) These steps are purely functional in that they state that information is organized into common categories. The specification goes on to state that all invoices are "stored as distinct records" in the user database and that "each record has an identifier that indicates the type of invoice," but this statement does not explain how invoices are organized. (Id. col.5 ll.45-51.) Finally, the specification teaches that after a vendor invoice is imported into the user database 3, the user must review and approve comparable invoices, which are "broken down into [their] various types of service." (Id. col.6 ll.15-24.) This "step" describes the outcome of organizing and states that various types of services are grouped together.

These portions of the specification to which Plaintiff cites "simply describe[] the function to be performed. [They] say[] nothing about how the [software] ensures that those functions are performed." Blackboard, 574 F.3d at 1384. That is, the specification discloses no algorithm corresponding to the "means for organizing" limitation. Plaintiff's expert submits that a skilled artisan would understand how "to provide an operative software program" based on the written specification (Pl.'s Objection 23), however, "the testimony of one of ordinary skill in the art cannot supplant the total absence of structure from the specification." Default Proof, 412 F.3d at 1302.

Plaintiff further argues the Magistrate Judge erred when he concluded that the disclosed hardware is insufficient because the recited hardware is merely a general purpose computer incapable of performing the claimed function. (Pl.'s Objection 24.) Plaintiff argues that the corresponding hardware are computer components, and that a combination of hardware and software together perform the recited function. (Id. at 25.) As discussed supra, "Rather than relying on [computer hardware], [a patentee] ha[s] to identify an algorithm that the computer hardware execute[s]," HTC Corp., 667 F.3d at 1280, and the patentee here failed to identify an algorithm performed by the

structure of which these components are a "necessary part," see HTC Corp., 667 F.3d at 1278.

The Court therefore ADOPTS the Magistrate Judge's recommended finding that the specification discloses no algorithm corresponding to the "means for organizing elements into common categories" recited in the asserted claims.

#### **IV. Claims Invalid as Indefinite**

The Magistrate Judge recommended that, because at least one of the two above-discussed means-plus-function limitations is contained in each of the four independent claims-at-issue (and by incorporation all of the dependent claims), all of the claims-at-issue in the patents-in-suit are invalid for indefiniteness. (Rep. and Rec. 28 (citing Blackboard, 574 F.3d at 1382; Aristocrat, 521 F.3d at 1331).) Neither party has filed objections to this recommendation. The Court therefore ADOPTS the Magistrate Judge's recommendation as to this issue.

#### **V. Conclusion**

For the foregoing reasons, the Court ADOPTS the Magistrate Judge's Report and Recommendation and GRANTS Defendant's Motion for Partial Summary Judgment.<sup>1</sup>

**IT IS SO ORDERED**, this 29th day of March, 2012.

s/ JON P. McCALLA  
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CHIEF U.S. DISTRICT JUDGE

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<sup>1</sup> As the Magistrate Judge noted, the parties have also filed their claim construction briefs, and the claims referenced in those briefs remain to be construed.